

## WHAT IS CLAIMED:

1           1. A method for electrically coupling together at least two electrically conductive  
2 layers of a printed circuit board, the method comprising the steps of:  
3           forming at least one through-hole in the printed circuit board; and  
4           inserting in the at-least-one through-hole an electrically conductive stake for  
5 electrically coupling foils disposed on the at least two electrically conductive layers  
6 together.

1           2. The method of claim 1 wherein the conductive stake has a polygonal shape,  
2 and the inserting step inserts the conductive stake such that at least one point of the  
3 polygonal shape makes contact with the foils.

1           3. The method of claim 1 wherein the conductive stake has conductive fins  
2 attached along a length of the conductive stake, and the inserting step inserts the  
3 conductive stake such that at least one conductive fin makes contact with the foils.

1           4. The method of claim 1 wherein the inserting step inserts the conductive stake  
2 such that the conductive stake is substantially disposed within the printed circuit board.

1           5. The method of claim 1 wherein the inserting step inserts the conductive stake  
2 such that a portion of the conductive stake extends beyond a surface of the printed circuit  
3 board.

1           6. A printed circuit board comprising:  
2           at least three layers of material, such that two of the layers of material are  
3 electrically conductive and the third layer is an electrical insulator and wherein the  
4 insulating layer is disposed between the conductive layers; and  
5           at least one conductive stake inserted into the printed circuit board for forming a  
6 via for electrically connecting foils from the two conductive layers together.

1           7. The printed circuit board of claim 6 wherein the conductive stake has a  
2 polygonal shape and is inserted such that at least one point of the polygonal shape makes

3 contact with the foils for forming the via.

1 8. The printed circuit board of claim 6 wherein the conductive stake has  
2 conductive fins attached along a length of the conductive stake, and is inserted such that  
3 at least one conductive fin makes contact with the foils for forming the via.

1 9. The printed circuit board of claim 6 wherein the conductive stake is  
2 substantially disposed within the printed circuit board.

1 10. The printed circuit board of claim 6 wherein a portion of the conductive stake  
2 extends beyond a surface of the printed circuit board.

1 11. A printed circuit board comprising:  
2 at least four conductive layers of material; and  
3 at least two conductive stakes inserted into a through hole of the printed circuit  
4 board for forming at least two different vias, one via electrically connecting together foils  
5 from two of the four conductive layers and the other via electrically connecting together  
6 foils from the remaining two of the four conductive layers.

1 12. The printed circuit board of claim 11 wherein at least one conductive stake  
2 has a polygonal shape, and is inserted such that at least one point of the polygonal shape  
3 makes contact with foils from two of the four conductive layers.

1 13. The printed circuit board of claim 11 wherein at least one conductive stake has  
2 conductive fins attached along a length of the conductive stake, and is inserted such that  
3 at least one conductive fin makes contact with foils from two of the four conductive  
4 layers.

1 14. The printed circuit board of claim 11 wherein at least one of the conductive  
2 stakes is substantially disposed within the printed circuit board.

1 15. The printed circuit board of claim 11 wherein a portion of at least one of the  
2 conductive stakes extends beyond a surface of the printed circuit board.